

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

POLAROID CORPORATION,

Plaintiff and Counterclaim Defendant,

v.

HEWLETT-PACKARD COMPANY,

Defendant and Counterclaim Plaintiff.

C.A. No. 06-738-SLR

REDACTED

**HEWLETT-PACKARD'S REPLY MEMORANDUM IN SUPPORT
OF ITS MOTION FOR SUMMARY JUDGMENT OF
NON-INFRINGEMENT, OR, IN THE ALTERNATIVE, PATENT INVALIDITY**

FISH & RICHARDSON P.C.

William J. Marsden, Jr. (#2247)

Raymond N. Scott, Jr. (#4949)

919 N. Market Street, Suite 1100

Wilmington, DE 19801

Tel.: (302) 652-5070

Fax: (302) 652-0607

Emails: marsden@fr.com; rscott@fr.com

Robert S. Frank, Jr. (*pro hac vice*)

Daniel C. Winston (*pro hac vice*)

Carlos Perez-Albuern (*pro hac vice*)

CHOATE, HALL & STEWART LLP

Two International Place

Boston, MA 02109

Tel.: (617) 248-5000

Fax: (617) 248-4000

Emails: rfrank@choate.com; cperez@choate.com;
dwinston@choate.com

John E. Giust (*pro hac vice*)

Matthew E. Bernstein (*pro hac vice*)

MINTZ, LEVIN, COHN, FERRIS,

GLOVSKY AND POPEO PC

3580 Carmel Mountain Road, Suite 300

San Diego, CA 92130

Tel.: (858) 314-1500

Fax: (858) 314-1501

Emails: jgiust@mintz.com; mbernstein@mintz.com

Dated: June 16, 2008

*Attorneys for Defendant and Counterclaim-Plaintiff
Hewlett-Packard Company*

TABLE OF CONTENTS

	<u>Page(s)</u>
NATURE AND STAGE OF THE PROCEEDINGS	1
SUMMARY OF ARGUMENT	1
STATEMENT OF THE FACTS	1
ARGUMENT.....	3
A. THE RELEVANT FACTS ARE UNDISPUTED.	3
B. Claims 1-3 Are Not Infringed.	6
1. The claimed ratio is not present in the LACE algorithm and, as a matter of law, the doctrine of equivalents is unavailable to Polaroid.	6
2. Claims 1-3 Are Not Infringed For The Separate Reason That Even Polaroid Does Not Contend That LACE Uses A Ratio, One Of Whose Components Is 256.	10
3. The LACE System Is Neither The Same As, Nor The Equivalent Of, The Means Claimed In Claims 1-3.	12
4. HP Does Not Infringe Claims 7-9.....	14
C. If Polaroid's Theory Applies, The '381 Patent Is Obvious In View Of The Okada Patent.	15
CONCLUSION.....	18

TABLE OF AUTHORITIES

CASES

<i>CCS Fitness, Inc. v. Brunswick Corp.</i> , 288 F.3d 1359 (Fed. Cir. 2002).....	11
<i>Desper Products, Inc. v. QSound Labs, Inc.</i> , 157 F.3d 1325 (Fed. Cir. 1998).....	12
<i>Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.</i> , 344 F.3d 1359 (Fed. Cir. 2003).....	7, 9
<i>Honeywell International Inc. v. Hamilton Sundstrand Corp.</i> , 523 F.3d 1304 (Fed. Cir. Apr. 18, 2008)	9
<i>Lockheed Martin Corp. v. Space Sys./Loral, Inc.</i> , 324 F.3d 1308 (Fed. Cir. 2003).....	6
<i>Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.</i> , 475 U.S. 574 (1986).....	5
<i>McKesson Information Solutions LLC v. The Trizetto Group</i> , 2006 WL 891048 (D. Del. Apr. 5, 2006).....	13
<i>Overhead Door Corp. v. Chamberlain Group</i> , 194 F.3d 1261 (Fed. Cir. 1999).....	13
<i>Rotec Indus., Inc. v. Mitsubishi Corp.</i> , 215 F.3d 1246 (Fed. Cir. 2000).....	5
<i>Transonic Systems, Inc. v. Non-Invasive Medical Technologies Corp.</i> , 143 Fed. Appx. 320 (Fed. Cir. 2005).....	7

RULES

Fed. Cir. R. 47.6.....	7
------------------------	---

NATURE AND STAGE OF THE PROCEEDINGS

This is a patent infringement action. Defendant Hewlett-Packard Company ("HP") has filed a motion for summary judgment of *non*-infringement of all asserted claims (claims 1-3 and 7-9) of U.S. Patent No. 4,829,381 (the "'381 patent"). Plaintiff Polaroid Corporation ("Polaroid") has filed a motion for summary judgment of infringement of claims 1-3 only. Each party has filed an Opposition to the other's motion. This reply memorandum is submitted in further support of HP's summary judgment motion.

SUMMARY OF ARGUMENT

HP did not infringe the '381 patent. All of the asserted claims of the patent require the use of an image enhancement algorithm that includes a particular, specifically-defined ratio. The accused LACE algorithm does not utilize the claimed ratio. Polaroid's argument that the LACE algorithm incorporates the equivalent of the required ratio is barred by the doctrine of prosecution history estoppel.

HP does not infringe claims 1-3 of the '381 patent for the further reasons that (1) even as modified by Polaroid, HP's LACE algorithm does not perform the function of a ratio in which the dynamic range of the electronic information signals (256) is one component of the ratio, and (2) HP does not use the apparatus/means disclosed in the patent or its equivalent.

STATEMENT OF THE FACTS

The relevant facts are stated in HP's initial Memorandum In Support Of Its Motion For Summary Judgment Of Non-Infringement, Or, In The Alternative, Patent Invalidity (D.I. 137) ("HP Init. Mem."), pp. 2-21. A similar, but less extensive, fact description is provided in defendant Hewlett-Packard's Memorandum In Opposition To Plaintiff Polaroid Corporation's Motion For Summary Judgment Of Infringement (D.I. 183) ("HP Opp. Mem."), pp. 1-10.

The Disclosures Of The '381 Patent. HP's prior memoranda explain the disclosures of the '381 patent. HP's Initial Memorandum provides illustrative examples of how the disclosed algorithm works in actual practice. Polaroid's Answering Brief ("Pol. Ans. Br.") (D.I. 193) does not dispute any material fact stated in those descriptions.

The Claims Of The '381 Patent. The language of the asserted claims of the '381 patent is not subject to dispute. Claims 1-3 are addressed to a "system" that has certain characteristics. These claims are stated in means plus function form. Claims 7-9 are process claims. The interpretation of those claims presents issues of law.

All of these claims are addressed to enhancing electronic image data by the use of a transfer function. The disclosed transfer function is $Y_{out} = 255 \left(\frac{Y_{in}}{255} \right)^\gamma$. Y_{in} is an input luminance value. Y_{out} is the luminance value that has been changed -- "transformed" -- by use of the algorithm. Gamma (γ) is a value that is calculated by the use of a formula. As values for gamma change, the transfer function changes. Thus, the determination of γ is said to "select" the particular transfer function that is used to transform the Y_{in} value. The claims of the '381 patent require that the formula used to calculate γ include a specifically-defined ratio (*see* p. 4, *infra*).

The Prosecution History. The prosecution of the '381 patent is a matter of record. The critical, indisputable fact is that the relevant claims of Polaroid's application were rejected as obvious in view of the prior art Okada patent. To overcome this rejection, Polaroid narrowed all of its now-asserted claims by adding limitations that require the use of the particular, specifically-defined ratio. *Compare* HP Init. Mem. pp. 16-19, 27-28 *with* Pol. Ans. Br., pp. 7-10.

The LACE Algorithm. Polaroid accuses a series of algorithms developed by HP, called LACE. The content of the actual LACE algorithms is undisputed. All include a version of the equation:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

REDACTED

[REDACTED]

HP Init. Mem. at 19-20.

ARGUMENT

A. THE RELEVANT FACTS ARE UNDISPUTED.

There is no dispute as to what the '381 patent discloses. The formula for gamma is:

$\gamma = (1 + C) \left(\frac{A_v}{M} - 1 \right)$. The relevant claims of the '381 patent require the use of the ratio stated in this formula. The ratio must include two values: (a) an "average electronic information signal," (*i.e.*, the "Av" value in the ratio used in the formula for gamma) and (b) "the dynamic range of the electronic information signals" (claim 1) or "a select proportionate value of the dynamic range of

electronic information signals” (claim 7) (*i.e.*, the “M” value in the ratio used in the formula for gamma). The ratio must be constructed “such that the ratio increases in correspondence with the increase in the value of the average electronic information signal.”

Independent claim 1 (from which claims 2 and 3 depend) states (with the added ratio limitation italicized):

A system ... comprising ... means for selecting one of a plurality of different transfer functions for the electronic information signal for each of the succeeding pixels in a manner whereby each transfer function is selected as a function of the electronic information signal for one pixel and the average electronic information signal for the select plurality of pixels containing said one pixel and for subsequently transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel *wherein said selecting and transforming means further operates to select said transfer function as a function of the ratio of the value of the average electronic information signal to the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal.*

(emphasis supplied).

Independent claim 7 (from which claims 8 and 9 depend) contains a similar (but not identical) limitation. It states (with the added ratio limitation again italicized):

A method ... comprising the steps of ... transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel *wherein said transfer function is selected further as a function of the ratio of the value of the average electronic information signal to a select proportionate value of the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal.*

(emphasis supplied).

REDACTED

Polaroid criticizes HP because, it states, HP relies on “unsupported attorney argument.” Pol. Ans. Br., pp. 13, 14-15. On a motion for summary judgment, the movant’s burden is to identify an issue as to which there is no genuine issue of material fact. The respondent must then cite evidence establishing the existence of such a dispute. *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986); *Rotec Indus., Inc. v. Mitsubishi Corp.*, 215 F.3d 1246, 1250 (Fed. Cir. 2000). In this case, the facts set forth above are undisputed. They do not require expert analysis. The accused algorithm does not include the required ratio.

In any event, in its response to Polaroid’s motion for summary judgment, HP filed the affidavit of its expert, Prof. Robert L. Stevenson, which contains virtually the same statements as are made in HP’s initial brief, and are made above. Affidavit of Dr. Robert L. Stevenson (“Stevenson Aff.”), ¶¶ 19-24, 46-55 (D.I. 185).

B. Claims 1-3 Are Not Infringed.

- 1. The claimed ratio is not present in the LACE algorithm and, as a matter of law, the doctrine of equivalents is unavailable to Polaroid.**

It is common ground (1) that claims 1-3 are stated in means plus function format (Pol. Ans. Mem., p. 16), (2) that the ratio limitation states a function (as distinguished from a means) (Pol. Ans. Mem., pp. 16-17), and (3) that in order to literally infringe, an accused system must perform a function that is identical to the claimed function. *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1320 (Fed. Cir. 2003).

REDACTED

Polaroid then announces that it has identified a ratio that it calls the “accused equivalent,” and asserts is “mathematically equivalent” to the formula for gamma claimed in the '381 patent. Pol. Ans. Mem., pp. 20-21. Polaroid therefore concludes that LACE performs the claimed function.

Polaroid’s argument is unavailing. First, an equivalent function is not an identical function. An equivalent function might satisfy the requirements of a means plus function claim

under the doctrine of equivalents *if the doctrine of equivalents were available to a plaintiff*, but it does not literally infringe. Polaroid cites only one case in support of its contention that an alleged mathematical equivalent may literally infringe a functional limitation in a means plus function claim. It places exclusive reliance on a non-precedential decision, *Transonic Systems, Inc. v. Non-Invasive Medical Technologies Corp.*, 143 Fed. Appx. 320, 329 (Fed. Cir. 2005). Pol. Ans. Mem., p. 21. Under the Federal Circuit Rule 47.6, as applicable in 2005, Polaroid may not rely upon this case. Its reliance on the case as precedent is a flat violation of the applicable Federal Circuit rule. In any event, the *Transonic* decision does not support Polaroid's position. In *Transonic*, the Federal Circuit said that two mathematical formulae could be found to be "equivalent" -- not that they were identical, and not that an equivalent formula literally infringes the functional component of a means plus function claim. *Transonic*, 143 Fed. App. at 329-30 ("... Transonic's expert further opined that NMT's reversed-line recirculation equation, for the 'saline' method, and the relations set for the in the '989 patent, were 'equivalent.' Notwithstanding the trial court's characterizing this evidence on equivalence as a mere 'assumption,' we find the expert testimony sufficient to raise a genuine issue of material fact resisting summary judgment").

Second, prosecution history estoppel prevents Polaroid from relying on the doctrine of equivalents. The application of the doctrine of prosecution history estoppel presents a question of law. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 344 F.3d 1359, 1367-1368 (Fed. Cir. 2003). During prosecution of the asserted claims of the '381 patent, Polaroid made an amendment that, it is undisputed, was (a) narrowing, and (b) made for a substantial reason relating to patentability. It added the ratio limitation to overcome a rejection based upon the

REDACTED

prior art Okada patent. Therefore, a presumption arises that prosecution history estoppel precludes the use of the doctrine of equivalents.

Polaroid makes two responsive arguments, one weaker than the other. It states that prosecution history estoppel only applies to the scope of equivalents between the original and amended application claims. In the present case, however, Polaroid is attempting to claim as an equivalent that which it knowingly surrendered during prosecution. As originally filed, claim 1 (and claim 7) required the selection of a transfer function "*as a function of* the average electronic information signal for a select plurality of pixels." These application claims would have covered, for example, a formula that included an average luminance value multiplied by another number, or an average luminance value from which a number was subtracted, because use of such formula would produce values that were "a function of" an average electronic information signal. By its claim amendment, Polaroid surrendered formulae of these types that did not also include the specified ratio. Because Polaroid surrendered formulae where an average electronic information signal was merely multiplied by another number or where a number was merely subtracted from an average electronic information signal, Polaroid surrendered formulas like the LACE algorithm, [REDACTED] Polaroid's present argument is an impermissible attempt to claim as an equivalent what it gave up when it amended its claims.

This point may be illustrated by reference to the Okada patent. The Okada algorithm was X^γ . " γ " may be $\frac{1}{2}$ (a fractional value). Marsden Decl. (D.I. 138), Ex. C; Okada patent, 5:24, 29. [REDACTED]

[REDACTED] One would then declare that Okada included the very same ratio that Polaroid added to its claims in

order to avoid Okada. Supplemental Expert Report of Dr. Rangaraj Rangayyan, Ex. C to the Declaration of Dr. Rangaraj Rangayyan ("Rangayyan Decl."), ¶¶ 40-56 (D.I. 190). Surely, Polaroid, when it prosecuted the '381 patent, surrendered the opportunity to perform such a maneuver.

Polaroid asserts that it can rebut the application of prosecution history estoppel "because the narrowing amendment bore no more than a tangential relation (if any) to the equivalent in question." Pol. Ans. Mem. at 22. However, Polaroid never states a reason for this conclusory statement, and there is none. "The tangential relation criterion for overcoming the *Festo* presumption is very narrow." *Honeywell International Inc. v. Hamilton Sundstrand Corp.*, 523 F.3d 1304, 1315 (Fed. Cir. Apr. 18, 2008). The burden is on the patentee (here, Polaroid) to show that the reason for the narrowing amendment was no more than "peripheral" to the alleged equivalent. The reason must be apparent from the face of the prosecution history itself. *Id.*; *Festo*, 344 F.3d at 1369.

In the case at bar, as in *Honeywell*, the added limitation was originally in a dependent claim. The Examiner rejected the independent claims, but said that the dependent claims would be allowable if rewritten in independent form. The added limitation -- the limitation imported from the narrower dependent claim -- required a specifically-defined ratio. Where, as here, the accused algorithm does not include such a ratio, but is said to be the equivalent of an algorithm that does, the narrowing amendment bears a very direct -- not a tangential -- relation to the alleged equivalent. *Honeywell*, 523 F.3d at 1316 ("the record shows that Honeywell made the amendment to add the IGV limitation. Because the alleged equivalent focuses on the IGV limitation, the amendment bore a direct, not merely tangential, relation to the equivalent. Tangentiality does not help Honeywell overcome the presumption of surrender").

Finally, the factual premise for Polaroid's equivalence argument is erroneous. Polaroid's expert's modification of LACE is not at all the "mathematical equivalent" of the calculation of gamma that is disclosed and claimed in the '381 patent.

REDACTED

In sum, the asserted claims require a particular ratio. The LACE algorithm does not include such a ratio. Polaroid argues that the LACE algorithm is an equivalent of an algorithm that does include the required ratio. Whatever may be the merits of that assertion (and it is wrong in fact), it is barred, as a matter of law, by the doctrine of prosecution history estoppel.

2. Claims 1-3 Are Not Infringed For The Separate Reason That Even Polaroid Does Not Contend That LACE Uses A Ratio, One Of Whose Components Is 256.

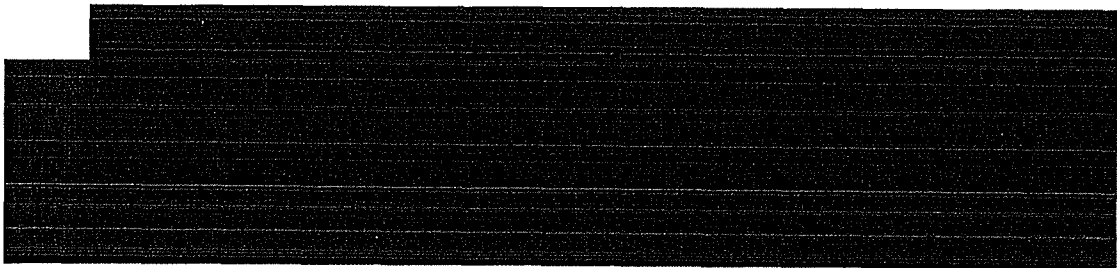
When Polaroid amended application claim 1 to add the ratio limitation originally stated in application claim 3, it changed the words of the limitation as they appeared in application claim 3 from (a) a ratio that included, as one of its components, "*a select proportionate value of the dynamic range of electronic information signals*" to (b) a ratio that included, as one of its

REDACTED

components “*the* dynamic range of electronic information signals.” December 8, 1988 Amendment (Marsden Decl., Ex. F), pp. 1-2 (emphasis added). By contrast, at the same time, Polaroid amended application claim 8 (issued claim 7) using the “select proportionate value” language. Thus, the language of claim 1 is different from both application claim 3 (from which it was derived) and issued claim 7 (which was amended at the same time as claim 1).

This difference in language cannot be ignored. The two phrases do not mean the same thing. The parties agree that, in an 8-bit system, a “select proportionate value of the dynamic range” is one of the integers between 0 and 255. By contrast, in an 8-bit system, “the dynamic range” is the total number of values available to express, for example, luminance (relative brightness). It is 256.

The term “the dynamic range” is expressly defined in the '381 patent. The patent states that an 8-bit system has “a dynamic range of 256.” '381 patent, 4:38. Where, as here, the patent expressly defines a term, that definition is controlling. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002) (claim term receives meaning given by patentee in the specification). Further, unasserted claim 10 of the '381 patent requires a ratio, one of whose values is “one half of the dynamic range of electronic information signals.” Polaroid states that, in an 8-bit system, one-half of “the dynamic range of electronic information signals” is 128. Pol. Ans. Mem., p. 24. It necessarily follows that in an 8-bit system, “the dynamic range of electronic information signals” is 256.



REDACTED

Polaroid does argue that a ratio, one of whose values is 256, [REDACTED]

[REDACTED]

Pol. Ans. Mem., p. 24. This argument fails. It vitiates a claim limitation. Having chosen to use the words "the dynamic of range of the electronic information signals" in lieu of "a select proportionate value of the dynamic range of the electronic information signals, Polaroid cannot properly contend that the words it chose to use may be ignored, or may be given a meaning that is the same as the words that it chose not to use. Moreover, the requirement of a ratio, one of whose components is 256, was added as part of a narrowing amendment made for a substantial reason relating to patentability -- the avoidance of the Okada patent.¹ Polaroid has not even attempted to overcome the presumption that it surrendered equivalents of 256. Finally, even if equivalents were available, Polaroid's argument would be misdirected. The question is not whether 256 is equivalent to any number within the dynamic range. [REDACTED]

[REDACTED]

There is no evidence that they are. [REDACTED]

For this separate reason, HP

does not infringe claims 1-3.

3. The LACE System Is Neither The Same As, Nor The Equivalent Of, The Means Claimed In Claims 1-3.

HP does not infringe claims 1-3 of the '381 patent for a further reason. HP does not make, use, or sell the means that is required by those claims. Claims 1-3 of the '381 patent claim a "system" in means plus function format. The disclosed means is an algorithm implemented by

¹ The fact that this aspect of Polaroid's claim amendment was not necessary to avoid Okada is irrelevant. *Desper Products, Inc. v. QSound Labs, Inc.*, 157 F.3d 1325, 1339-401 (Fed. Cir. 1998).

an apparatus -- a group of specifically identified circuits arranged in a particular relationship. '381 patent, 6:58-7:42. Neither the use of software, nor the use of a general purpose computer, is mentioned or suggested in the patent. It is undisputed that the LACE system does not use the means -- the specially configured group of circuits -- that is disclosed in the patent.

Polaroid argues that the '381 patent discloses "a specific algorithm for performing the claimed function. Pol. Ans. Mem., p. 26. It does, but it also describes an apparatus. The disclosed apparatus is not an alternative embodiment (*see* Pol. Ans. Mem., p. 27). It is the only physical thing disclosed in the patent; and it is the component of the claimed system that implements the algorithm. Thus, the claimed system is the disclosed apparatus when it implements the disclosed algorithm. '381 patent, 7:27-42.

Polaroid cites this Court's decision in *McKesson Information Solutions LLC v. The Trizetto Group*, 2006 WL 891048, n.22 (D. Del. Apr. 5, 2006). Pol. Ans. Mem., p. 25. The case actually supports HP's position. In *McKesson*, the relevant claim was a means plus function claim. The patent disclosed an algorithm. The Court held, at n.22, that the specification "link[ed] the claimed means to software." Therefore, it held (1) that software was the structure that constituted the claimed means, and (2) that the claim was limited to software that implemented the disclosed algorithm. By analogy, the '381 patent links the claimed means to a particular, described apparatus. The claimed means is the disclosed apparatus, using the disclosed algorithm. It is undisputed that HP does not use such a means.

The other cases cited by Polaroid stand for no more than the proposition that an affidavit by a qualified expert, created an issue of fact with respect to whether a particular software solution was the equivalent of a particular hardware device. *See, e.g., Overhead Door Corp. v. Chamberlain Group*, 194 F.3d 1261, 1269-70 (Fed. Cir. 1999). It is not enough merely to state,

REDACTED

as Polaroid does, a blanket conclusion that undefined "software" is the equivalent of a specifically described apparatus. Similarly, it is not enough to cite such a conclusion when stated by a person -- Polaroid's image enhancement expert -- who has testified that [REDACTED]

Agouris Dep., Ex. B to the Declaration of William J. Marsden, Jr. In Support of HP's Motion to Preclude Certain Testimony of Polaroid's Expert Dr. Peggy Agouris, pp. 50-51, 53-55, 59, 172, 198, 205, 221 (D.I. 169); *see* Defendant Hewlett-Packard Company's Memorandum In Support Of Its Motion To Preclude Certain Testimony Of Polaroid's Expert Peggy Agouris, pp. 2-5, (D.I. 167).

HP does not use the means claimed in claims 1-3 of the '381 patent. Therefore, it does not infringe those claims.

4. HP Does Not Infringe Claims 7-9.

Claims 7-9 are process claims. As originally filed, these claims did not include the ratio limitation that is quoted at p. 4, *supra*. They were rejected as obvious in view of the Okada patent. In order to overcome that rejection, Polaroid made a narrowing amendment to issued claim 7 (application claim 8). The amendment added the requirement that the selection of the transfer function be "a function of the ratio of the value of the average information signal to a select proportionate value of the dynamic range of electronic information signals" *See* Marsden Decl., Ex. F, p. 5. Polaroid thereby also narrowed issued dependent claims 8 and 9.

Thus, the summary judgment issue presented with respect to claims 7-9 is the same as the issue addressed in Sections A and B(1) of this memorandum.² In order to infringe a process claim literally, the defendant must use a process that is the same as the claimed process. In the context of claims 7-9, an accused infringer must select a transfer function -- must calculate gamma -- by the use of the specifically-defined ratio that is stated in the claim. For the reasons stated above, the LACE algorithm does not include such a ratio. Therefore, there can be no literal infringement.

As with claim 1, Polaroid's argument is, at most, an argument that HP infringes under the doctrine of equivalents. However, for exactly the same reasons as are stated above, the doctrine of equivalents is not available to Polaroid. Like claim 1, claim 7 (then application claim 8) was narrowed during prosecution for a substantial reason relating to patentability. Polaroid thereby surrendered alleged equivalents that do not include the ratio defined in the claims as amended; Polaroid is, therefore, barred from contending that algorithms that do not include the defined ratio are the equivalent of algorithms that do include the claimed ratio. As a matter of law, therefore, HP cannot infringe claims 7-9 under the doctrine of equivalents

C. If Polaroid's Theory Applies, The '381 Patent Is Obvious In View Of The Okada Patent.

The Okada patent describes an Okada algorithm whose purpose is to enhance contrast in the very bright or very dark portions of an image. Okada teaches the use of an algorithm in which an output signal value is calculated using the formula: X^{γ} . In this Okada algorithm, "X"

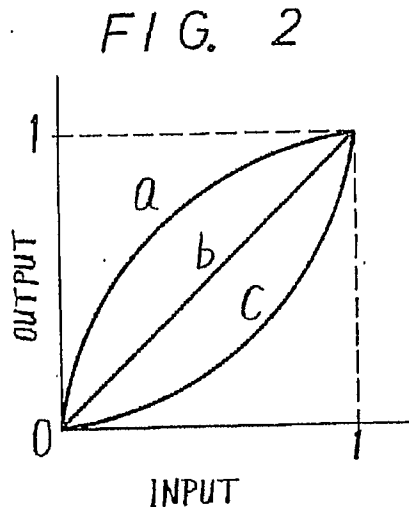
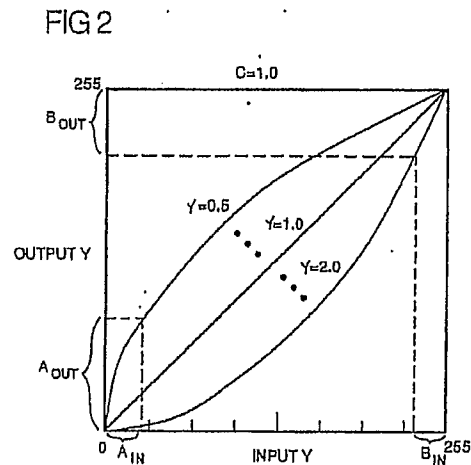
² Because of the difference in language between claims 1 and 7 regarding "a select proportionate value of the dynamic range," the issue discussed in Section B(2) does not apply to claims 7-9. Also, because claims 7-9 are not stated in means plus function terms, the issue discussed in Section B(3) is inapplicable to claims 7-9.

is a value between 0 and 1. Zero is the darkest value. One is the brightest value. Intermediate values are proportionate to relative brightness.

“X” is analogous to $\frac{Y_{in}}{255}$ in the algorithm described in the '381 patent. In the patent-in-suit, luminance value is calculated using the formula: $255\left(\frac{Y_{in}}{255}\right)^\gamma$. In this algorithm, like the Okada algorithm, the base, $\frac{Y_{in}}{255}$, is a measure of relative brightness. As in Okada, it varies between 0 and 1. Zero is the darkest value. If Y_{in} is 0, $\frac{Y_{in}}{255}$ is 0 ($\frac{0}{255}$). 255 is the brightest value. If Y_{in} is 255, $\frac{Y_{in}}{255}$ is 1 ($\frac{255}{255}$). In the '381 algorithm, just as in Okada, intermediate values are proportionate to relative brightness.

In Okada, as in the '381 patent, the exponent, “ γ ,” is the factor that, by changing from one situation to another “selects” the transfer function. Like the '381 patent, Okada discloses that γ is a fractional value in very dark areas and a value greater than one in very bright areas. Okada Patent, 5:21-32.

Because of the close similarity between the Okada algorithm and the algorithm of the '381 patent, the output of the two algorithms is indistinguishable:

Okada Fig. 2'381 Patent Fig. 2

Okada does not, on its face, calculate γ by the use of a ratio. However, as explained above, if one may indulge in the kind of substitutions in which Polaroid's expert engages, one may substitute $\left(\frac{Av}{M}\right)^D$ for a particular numeric value for " γ " in the Okada algorithm. In such a substitution, "D" would be whatever number that returns $\frac{Av}{M}$ to the original value for γ . One may thus find in Okada the selection of a transfer function by the use of, or an equivalent of, the claimed ratio.

In her report, Polaroid's expert, Dr. Peggy Agouris, says just that.

REDACTED

Dr. Agouris affirmed these statements in her affidavit. Rebuttal Expert Report of Dr. Peggy

Agouris, Ex. C to the Joint Appendix to Polaroid Corp.'s Opening Briefs in Support of its Motions for Summary Judgment, pp. 31-32 (D.I. 151).

Having now realized the implications of this statement in her report and affidavit, Dr. Agouris recants. Declaration of Dr. Peggy Agouris Regarding Okada Reference, Pol. Ans. Br., Ex. 3, ¶¶ 13-15.

Instead, she says -- contrary to her report and affidavit

REDACTED

Polaroid points to differences between the disclosures of Okada and the '381 patent, but it does not relate those differences to the words of the claims of the '381 patent. The patent examiner concluded that, without the added ratio limitation, the claims of the '381 patent were obvious in view of the Okada patent. As HP's expert, Dr. Rangayyan, explains in his report and declaration, the teaching of Okada also renders the asserted claims of the '381 patent obvious, *if* one is permitted to substitute a ratio that conforms to the requirements of the '381 claims for a numeric value found in the exponent of the Okada image enhancement algorithm. Rangayyan Decl., Ex. C, ¶¶ 40-56. Thus, Polaroid's theory, created for the purpose of alleging infringement, would, if applied to the prior art Okada patent, render the '381 patent invalid.

CONCLUSION

The Patent Examiner determined that the claims of the '381 patent, as then presented, were obvious in view of the Okada patent. Polaroid did not dispute that conclusion. It amended its claims to add the ratio limitation. HP's accused LACE algorithm does not include the

required ratio. Therefore, it does not infringe. Summary judgment of non-infringement should be granted. Any other conclusion effectively vitiates the ratio limitation and renders the '381 patent invalid in view of the Okada patent.

Dated: June 16, 2008

FISH & RICHARDSON P.C.

By: /s/ William J. Marsden, Jr.

William J. Marsden, Jr. (#2247)
Raymond N. Scott, Jr. (#4949)
919 N. Market Street, Suite 1100
Wilmington, DE 19801
Tel.: (302) 652-5070
Fax: (302) 652-0607
Email: marsden@fr.com; rscott@fr.com

Robert S. Frank, Jr. (pro hac vice)
Daniel C. Winston (pro hac vice)
Carlos Perez-Albuerna (pro hac vice)
CHOATE, HALL & STEWART LLP
Two International Place
Boston, MA 02109
Tel.: (617) 248-5000
Fax: (617) 248-4000
Emails: rfrank@choate.com; dwinston@choate.com;
cperez@choate.com

John E. Giust (pro hac vice)
Matthew E. Bernstein (pro hac vice)
MINTZ, LEVIN, COHN, FERRIS,
GLOVSKY AND POPEO PC
3580 Carmel Mountain Road, Suite 300
San Diego, CA 92130
Tel.: (858) 314-1500
Fax: (858) 314-1501
Emails: jgiust@mintz.com; mbernstein@mintz.com

*Attorneys for Defendant and Counterclaim-Plaintiff
Hewlett-Packard Company*

CERTIFICATE OF SERVICE

I hereby certify that on June 16, 2008, I electronically filed with the Clerk of Court the foregoing document using CM/ECF which will send electronic notification of such filing(s) to the following counsel:

Via Email

Jack B. Blumenfeld (#1014)
Julia Heaney (#3052)
MORRIS, NICHOLS, ARSHT & TUNNELL, LLP
1201 North Market Street
Wilmington, DE 19899-1347
Phone: 302-658-9200
Fax: 302-658-3989
Emails: *jblumenfeld@mnat.com; jheaney@mnat.com*

Attorneys for Plaintiff and
Counterclaim-Defendant
Polaroid Corporation

Via Email

Russell E. Levine, P.C.
Michelle W. Skinner/David W. Higer
Maria A. Meghinnes/Courtney Holohan/C. Beasley
KIRKLAND & ELLIS LLP
200 East Randolph Drive
Chicago, IL 60601
Phone: 312-861-2000
Fax: 312-861-2200
Emails: *rlevine@kirkland.com; ggerst@kirkland.com;*
mskinner@kirkland.com; dhiger@kirkland.com;
mmeghinnes@kirkland.com; mmeghinnes@kirkland.com;
cbeasley@kirkland.com

Attorneys for Plaintiff and
Counterclaim-Defendant
Polaroid Corporation

Courtesy Copy Via Federal Express

Michelle W. Skinner
KIRKLAND & ELLIS LLP
200 East Randolph Drive
Chicago, IL 60601
Phone: 312-861-2000
Fax: 312-861-2200

/s/William J. Marsden, Jr.
William J. Marsden, Jr.